

Therapeutic effectiveness and social context: the case of lobotomy in a California state hospital, 1947-1954

Introduction

That social and cultural values and beliefs play an integral part in physicians' medical practices has long been acknowledged.^{1,2} Nonetheless, we often lose sight of this fact in contemporary medicine, especially as our knowledge and interventions appear to be increasingly based in science and less upon the vagaries of the sociocultural context.³ But in every era, physicians generally believe that they have based their therapeutic decisions upon the firm bedrock of their contemporaneous science.^{4,5} Given that our predecessors most likely had as much faith in their treatments as we do in ours, history can help us to expose the ways in which physicians incorporate the social and cultural world into their medical practices. By studying a therapy that is no longer used, we can step out of our "time and place" bias, where our surrounding culture and clinical presuppositions are often uncritically accepted, and explore a treatment without inserting our own preconceptions. To this end, this essay examines how physicians' use of a Nobel Prize winning intervention reflected both institutional needs and cultural values concerning women, illustrating how the social world can become an indivisible part of what physicians' deem as disease and therapeutic effectiveness.

Specifically, we will explore doctors' use of lobotomy in a California state hospital between 1947 and 1954. Not only were state hospital physicians subject to obvious institutional constraints,^{6,8} but study of a now discredited therapy such as lobotomy allows us to examine the ways in which physicians constructed effectiveness. Since few currently would argue that lobotomy worked, we do not need to concern ourselves with the thorny problem of efficacy.⁹ I performed a quantitative and qualitative analysis of the medical records of patients who underwent this procedure. In addition to the usual contents of a medical record, these records also contain verbatim transcripts of patient interviews, which were performed on admission and on consideration of a major therapeutic intervention.

History of the surgery

Let us first briefly review the history of this surgery, which, for our purposes, begins in the early 1930s. Based on several decades of experimental and clinical evidence, the Portuguese neurologist Egas Moniz speculated that

fixed neuronal connections in the frontal lobes led to psychiatric disease, and that disruption of these connections could lead to cure.¹⁰⁻¹² In 1935, Moniz tested this theory on a psychiatric patient by severing the frontal white matter projections with multiple injections of alcohol into the frontal lobes, thus giving birth to the first modern frontal lobotomy.¹³ Despite some opposition, the treatment eventually gained widespread legitimacy and became part of mainstream medical practice.¹⁴ Under-scoring its scientific acceptance, the Nobel Prize Committee awarded Moniz the 1949 prize in physiology and medicine.¹⁵ As a result of these scientific credentials, physicians throughout the United States began using the remedy. By 1950, for example, the surgery was performed in 286 hospitals in the United States and, by 1951, an estimated 18,000 patients had undergone the operation.¹⁶

Medical record review

The site of my medical record review was Stockton State Hospital, located about 30 miles southeast of Sacramento. Opened in 1851, Stockton is the oldest psychiatric institution west of the Missouri River.¹⁷⁻¹⁹ Just before the introduction of lobotomy into Stockton, over 4,000

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Egaz Moniz—
inventor of the
lobotomy.

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Summary Points

- Physicians believe they base their therapeutic decisions on science but in fact incorporate social and culture issues into their medical practices
- The practice of lobotomy in the late 1940s and early 1950s illustrates some of the ways in which physicians employ sociocultural factors in their medical treatment of patients
- Records of lobotomized individuals from a California state psychiatric institution show that between 1947 and 1954 the social problems of hospital management (especially the need for order) determined what physicians saw as disease and how they measured therapeutic success or failure
- Lobotomizing over five times as many women as men, physicians at this institution also incorporated prevalent cultural views concerning women in their practice of lobotomy, both in how they determined surgically treatable psychiatric disease and how they measured a woman's response to the surgery

patients lived behind its walls, treated by 11 physicians.²⁰ Not surprisingly, given this overwhelming, although not unique, patient to doctor ratio, physicians placed an extremely high value on maintaining order within the asylum. Uncontrollable patients not only posed vexing clinical problems but severely taxed the staff's meager resources, often compromising the care of other, more compliant patients. Nonetheless, physicians did possess a variety of technologies with which to maintain order: these included electroconvulsive therapy, hydrotherapy, mechanical restraints, and chemical restraints (such as barbiturates and hyoscine).²¹ Despite this array of interventions, some patients proved unresponsive. It was against this background that physicians' use of lobotomy reflected their institutionally dictated need for order. This context also provided a fertile ground for physicians to see women as more likely surgical candidates than men.

Between March 1947 and June 1954, physicians performed 245 lobotomies on 232 patients. They abruptly terminated their lobotomy program with the introduction of the antipsychotic drugs reserpine and chlorpromazine in 1954. Since a number of case files were either lost or misplaced, 147 patient records were available for review. In what follows, I will show how doctors' use of lobotomy reflected their vision of proper gender roles for women. First, however, I will present typical verbatim comments culled from a careful reading of these available records to illustrate how physicians transformed an institutional imperative into a matter of individual therapeutics.

Social control and medical treatment

For Stockton physicians, lobotomy was simultaneously a method of patient management and ward management. Emphasizing the social aspect of psychiatric disorder, doctors at Stockton defined surgically treatable disease as

uncontrollable behavior. And they most commonly cited those behaviors that disrupted the ward routine and occupied the attendants and nurses as the kind in most dire need of surgery. Thus, not surprisingly, physicians saw little difference between what benefited the individual patient and what benefited the ward. The following case illustrates how doctors saw lobotomy as a solution for both social and individual problems.²²

The patient, a 40-year-old woman, had undergone two previous radical lobotomies but continued to display "extremely perverse behavior." In recommending a third lobotomy, her ward physician wrote:

A transorbital variety of prefrontal leukotomy has not yet been tried and it is recommended...[T]here is a hope that personnel may be released for more useful work elsewhere if not required to continually supervise and restrain this patient.²³

Furthermore, physicians determined a successful or unsuccessful outcome by how well a lobotomized patient adapted to the ward routine as this next example illustrates:

Six months [after lobotomy] she was still... restless, assaultive toward others and herself... kicking and fighting anyone who came near... antagonistic, she screams and throws anything she can get ahold of... The question is, would a second radical prefrontal be of any help?²⁴

The staff's continued inability to control this woman's violence constituted her physician's primary measure of the treatment's effectiveness. Significantly, the first lobotomy's failure did not shake the doctor's belief in the surgery as a means of behavioral control. Shortly after this note was written, the patient underwent a second lobotomy.

Doctors' focus on institutional needs instead of than the individual patient often created what appear in hindsight as some curious measures of therapeutic success. For example, a frequent side effect of frontal lobotomy was that patients became apathetic and indifferent, lacking any of their previous emotional spontaneity.²⁵⁻²⁸ However, since conformity to ward routine measured therapeutic success, Stockton physicians transformed these neurologic sequelae into measures of effectiveness, as this discussion between several physicians suggests:

Dr. A: [Before lobotomy] she was regressed an awful lot—she was in restraint most of the time, would spit at people and break things up.

Dr. B: [Lobotomy] leaves them all pretty flat and indifferent about things. It seems to be characteristic—

Dr. A: There is not much animation any more.

Dr. C: Maybe that is what cures them.²⁹

For these doctors, “cure” had as much to do with conserving the institution’s precious staff resources as with addressing this woman’s individual needs.

Gender and Therapeutics

Focusing on gender, let us now take a quantitative look at Stockton’s Lobotomy program. Of the 241 patients where sex could be identified from the surgical summaries, 205 (85%) were women and 36 (15%) were men. Demographics cannot account for these differences. Men not only outnumber women within the hospital, but they also predominated in the diagnostic categories that physicians most commonly lobotomized, schizophrenia being by far the most frequent diagnosis given to a surgical candidate. It is also worth noting that one third of the physicians who participated in the lobotomy program were women. Interestingly, I found that these gender differences were present only in these doctors’ use of lobotomy. In the case of electroconvulsive therapy, doctors treated an equal number of women and men as is evident from a sample of 400 randomly selected records with admission dates roughly equaling those of the lobotomy sample. In this sample, the relative frequencies with which women underwent electroconvulsive therapy equaled that of men. Similarly, I found no evidence that doctors used other remedies, such as hydrotherapy or malaria fever therapy, on women more often than men.

How can we account for these gender differences? While it is possible that these physicians were simply misogynistically acting out their greater desire to control and subjugate women rather than men, a causal explanation is difficult to prove. However, irrespective of the source of these marked differences, physicians incorporated their views concerning the social roles of women into what they considered medical indications for lobotomy and their assessments of the effectiveness of the surgery. Through this process, physicians transformed social values into problems of medical management, a process vividly illustrated by what doctors at Stockton actually said to their patients and their patients’ loved ones.

For example, doctors often saw a woman’s inability to conform to expected social roles as evidence of psychiatric disease. Let us listen in on a conversation between a physician and his patient. In this case, the doctor successfully ferrets out telltale signs of operable psychiatric disorder.

Doctor: Why haven’t you been looking after the children better than you have?

Patient: I was working for the telephone company.

Doctor: Was it necessary for you to work? Wouldn’t it have been better for you to stay home and look after the children?

Patient: It might have been better.

Doctor: Why didn’t you?

Patient: I intend to do better.

Doctor: It is strange behavior. First you don’t stay with the children but go to work; now you are not with them [but] you want to be with them.

Patient: (No answer.)³⁰

This “strange behavior”—that is the patient’s ambivalence about taking care of her children—played an important part in the doctor’s and his colleagues’ decision to classify her as a psychiatric patient and their decision to lobotomize her.

These accepted social values about a woman’s ideal role also provided doctors with a yardstick for measuring the success of the surgery. Although the neurological deficits caused by the procedure often made patients oblivious to their postsurgical psychiatric state, husbands frequently attested to their wives’ recoveries. In the following dialogue we see that despite the patient’s loss of spontaneity and individual desires, both the doctors and the patient’s husband believed that these deficits posed little problem for her recovery.

(Patient dismissed)

Doctor: We want to get some idea from you how she has been [since the lobotomy].

Husband: I think she has been behaving wonderful.

Doctor: She doesn’t seem to worry?

Husband: That is one thing. Before commitment she was awfully worried about everything. It was a continuous worry all the time but now she takes things as they come... She kind of watches over the house and cleans it and the only one thing she is not too particular about her appearance. She don’t care what anybody says.

Doctor: That is one of the disadvantages of this operation she had.

Husband: I think it is for the best really because she doesn’t worry at all about anything.³¹

Noting that “the husband is more satisfied,” the staff discharged her as recovered. For this patient’s doctors and her husband, her restoration as an ideal wife—that is, her ability to cook, clean, and do housework—was an integral part of her recovery. While her redemption as an “ideal woman” came at substantial personal cost, her husband and doctors saw this as a small price to pay when measured against social and institutional values.

Conclusion

Institutional and social factors intimately affect medical practice. For physicians at Stockton State Hospital, these factors determined what kinds of behaviors they saw as disease and how they measured therapeutic success. Based on the best biological science of the mid-twentieth century, this Nobel Prize winning therapy was as much a social technology as a medical one. But we should not be too harsh in our judgement of these doctors. Just as we are today, they and their science were enmeshed in a specific time and context in which social and medical values were part of the same world.

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- In order to protect patient privacy, all numbers and identifying characteristics have been changed. I have retained the original spelling and punctuation in all of my quotations from the medical record. Records from Stockton State Hospital were at the Stockton Developmental Center until its closing in February of 1996. With appropriate permission from the California Department of Mental Health, one can obtain the actual patient record numbers from the author.
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Can a reference source really meet the needs of "a student, resident or clinician," as the user's guide for this CD claims? To do so, the information it provides would need to be readily accessible, up to date, and capable of answering the questions that members of each of these groups might pose.

It is certainly quick. The questions I asked it in a week of seeing patients, preparing for teaching sessions, and reviewing grant applications convinced me of that. Whether I wanted to know about drugs, diseases, or diagnostic tests that were unfamiliar to me, the search engine usually found what I was looking for within 2 seconds (you don't even need to understand its Boolean search operators).

When I checked how current it was I was even more impressed. Every reference until the end of 1997 that I knew about was there with abstracts and hypertext links. I was unable to discover any omitted references without extending my searches beyond Medline.

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The system's functionality goes beyond the limitations of other CD Roms by providing facilities for updating and personalizing the material it contains. The database may be continuously updated via links to 200 internet addresses. Individuals can tag and bookmark the material that is relevant to them.

Many students, residents, and even clinicians don't yet have uninterrupted access to a computer with a CD Rom. Perhaps the availability of reference material like this will encourage more information technology managers to invest in giving their students and clinicians the rapid, relevant access they need to practice evidence based medicine.

—Frank Sullivan, *Professor of research and development in general practice and primary care*, Tayside Centre for General Practice, Dundee University